CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
# 4, 7TH MAIN MALLESWARAM, BANGALORE -3

# TEST RESULTS OF GRADATION FOR GSB
## (IS 2386:(Part 1) 1963 (RA2011)

| | | |
|---|---|---|
| **Lab ID** | : | **CP-RW-2017-06-23-01** **Date: 27-06-17** |
| **Customer** | : | Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore. |
| **Address** | : | Shettyhalli Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Improvements to Roads & Drains chikkasandra 13th, 14th, 15th connected to A & B layout in ward no.12 in Shettyhalli Sub Division. |
| **Agency** | : | Technical Manager (west), KRIDL, Project Implementation Unit, No.280, 59th cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560010 |
| **Customer Reference** | : | BBMP/EE/DD/WO/121/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 23-06-17 |
| **Sample ID No** | : | 2017-06-23-01-01 |
| **Type of Mix** | : | GSB (Granular Sub Base) |
| **Date of test** | : | 25-06-17 |
| **Oven Dry Weight** | : | 10120 Grams |

| IS Sieve Size(mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Spec. Limit Vide Table 400.1 MORTH Specification |
|---|---|---|---|---|---|
| 75 | 0 | 0 | 0 | 100 | 100 |
| 53 | 996 | 996 | 9.84 | 90.16 | 80-100 |
| 26.5 | 1686 | 2682 | 26.50 | 73.50 | 55-90 |
| 9.5 | 1292 | 3974 | 39.27 | 60.73 | 35-65 |
| 4.75 | 1490 | 5464 | 53.99 | 46.01 | 25-55 |
| 2.36 | 1764 | 7228 | 71.42 | 28.58 | 20-40 |
| 0.425 | 1666 | 8894 | 87.89 | 12.11 | 10-25 |
| 0.075 | 896 | 9790 | 96.74 | 3.26 | 0-5 |

**TESTS ON FILLER SCREEN MATERIALS**

| Sl no | Particulars | Test results | Spec.Limit Vide Table 400.2 MORTH Specification |
|---|---|---|---|
| 1 | Liquid Limit, % | 21.33% | Maximum 25 |
| 2 | Plasticity index, % | Non plastic | Maximum 6 |

**Note:-**
The results pertain to the samples received and tested.
All information Furnished by Customer/ Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

**Prepared By:**
Harshitha

CIVIL Pro Sig..... Date..... BANGALORE

**FOR CIVIL Pro.**
**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**

Page 1/1
*End of Report*

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

## TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2017-06-27-05** **Date: 28-06-17** |
| **Customer** | : | Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore. |
| **Address** | : | Shettyhalli Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Improvements to Roads & Drains chikkasandra 13th, 14th, 15th connected to A & B layout in ward no.12 in Shettyhalli Sub Division. |
| **Agency** | : | Technical Manager (west), KRIDL, Project Implementation Unit, No.280, 59th cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560010 |
| **Customer's Reference** | : | BBMP/EE/DD/WO/121/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 27-06-17 |
| **Sample ID No** | : | 2017-06-27-05/01 |
| **Sample Type** | : | Birla Super 53grade |
| **Reference to BIS codes** | : | IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,<br>IS 4031 (Part 1,2 3,4,5, 6,11):1988<br>IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4<br>IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5<br>IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6<br>IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5<br>IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5<br>IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6 |
| **Date of test** | : | 27-06-17 |

| Sl.No. | Physical properties | Results | Requirement as per IS 12269: 2013 |
|---|---|---|---|
| 1 | Fineness by dry sieving (%) | 2.45 | – |
| 2 | Finess by Air permeablity method ($m^2$/kg, Min) | 266.5 | 225$m^2$/kg, Min |
| 3 | Density (gm/cc) | 3.19 | – |
| 4 | Standard Consistency (%) | 28.5% | Not specified |
| 5 | Initial Setting time | 185 minutes | Not less than 30 minutes |
| 6 | Final Setting time | 260 minutes | Not more than 600 minutes |
| 7 | Soundness (Le Chatelier's Method) | 2mm | Not more than 10 mm |

**Note:**

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

**Prepared by**
Harshitha

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**

AE-12
ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

CIVIL Pro Sig..... Date..... BANGALORE


****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
# 4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: T- 4358

## TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2017-06-27-05** **Date: 25-07-17** |
| **Customer** | : | Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore. |
| **Address** | : | Shettyhalli Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Improvements to Roads & Drains chikkasandra 13th, 14th, 15th connected to A & B layout in ward no.12 in Shettyhalli Sub Division. |
| **Agency** | : | Technical Manager (west), KRIDL, Project Implementation Unit, No.280, 59th cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560010 |
| **Customer's Reference** | : | BBMP/EE/DD/WO/121/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 27-06-17 |
| **Sample ID No** | : | 2017-06-27-05/01 |
| **Sample Type** | : | Birla Super 53grade |
| **Reference to BIS codes** | : | IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,<br>IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5<br>IS 4031 Part 6, Determination of Compressive Strength, Clause 6 |
| **Date of test** | : | 27-06-17 |

**Compressive Strength**

| Sl.No. | Physical properties | Results | Requirement as per IS 12269: 2013 |
|---|---|---|---|
| 1 | 3 Days | 29.5N/mm$^2$ | Not less than 27 N/mm$^2$ |
| 2 | 7 Days | 40.0N/mm$^2$ | Not less than 37 N/mm$^2$ |
| 3 | 28 Days | 58.5N/mm$^2$ | Not less than 53 N/mm$^2$ |

**Note:**
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

**Prepared by**
Harshitha

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಪೆಬ್ಬಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಬಿ. ರಸ್ತೆ, ಇಂದ್ರನಗರ, ಬೆಂಗಳೂರು

CIVIL Pro Sig..... Date..... BANGALORE

**FOR CIVIL Pro.**
**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**


****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

## TEST REPORT ON COARSE AGGREGATES

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2017-06-27-05** **Date: 30-06-17** |
| **Customer** | : | Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore. |
| **Address** | : | Shettyhalli Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Improvements to Roads & Drains chikkasandra 13th, 14th, 15th connected to A & B layout in ward no.12 in Shettyhalli Sub Division. |
| **Agency** | : | Technical Manager (west), KRIDL, Project Implementation Unit, No.280, 59th cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560010 |
| **Customer's Reference** | : | BBMP/EE/DD/WO/121/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample condition** | : | Satisfactory |
| **Date of Receipt** | : | 27-06-17 |
| **Sample ID No** | : | 2017-06-27-05-02(a) |
| **Sample Type** | : | 40mm down size coarse aggregate |
| **Reference to BIS codes** | : | IS: 383:2016 (Specification for Coarse and fine Aggregates )<br>IS: 2386 :1963(Part - 1,3,4) RA2011<br>IS 2386 Part 1: Particle Size and Shape<br>IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption<br>IS 2386 Part 4: Mechanical Properties |
| **Date of test** | : | 27-06-17 |

**SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:**

**Total weight taken : 15000 grams**

| Sample No. | Sieve No. | Weight Retained in gms | Cumulative Weight Retained in gms | % Cumulative Weight Retained | % Passing | Required as per IS 383:2016 |
|---|---|---|---|---|---|---|
| 1 | 80 mm | 0 | 0 | 0.0 | 100 | 100 |
| 2 | 40 mm | 321 | 321 | 2.1 | 97.9 | 90-100 |
| 3 | 20 mm | 5657 | 5978 | 39.9 | 60.1 | 30-70 |
| 4 | 10 mm | 4457 | 10435 | 69.6 | 30.4 | 10-35 |
| 5 | 4.75 mm | 4234 | 14669 | 97.8 | 2.2 | 0-5 |
| 6 | Pan | 331 | 15000 | 100.0 | 0 | --- |



CIVIL Pro Sig..... Date..... BANGALORE

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

## TEST REPORT ON COARSE AGGREGATES

**Lab ID** : **CP-2017-06-27-05** **Date: 30-06-17**

**Sample ID No** : 2017-06-27-05-02(a)

**PHYSICAL PROPERTIES**

| Sl.no | Tests | Result | Requirements as per IS:383-2016 |
|---|---|---|---|
| 1 | Flakiness Index(%) | 12.4 | Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate |
| 2 | Elongation Index(%) | 12.1 | |
| 3 | Specific Gravity | 2.69 | – |
| 4 | Bulk Density(Loose) (Kg/l) | 1.57 | – |
| 5 | Bulk Density(Compacted) (Kg/l) | 1.59 | – |
| 6 | Water Absorption(%) | 0.21 | – |

**Note:**
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

**Prepared by**
Harshitha

**FOR CIVIL Pro.**

CIVIL Pro Sig..... Date..... BANGALORE

**R KARTHIK RECHAN**
Authorized Signatory
**Quality Manager**

ಸರ್ಕಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಪೆಟ್ರೋಳ್ಳು ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಯಶ್ವಂತ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು


****End of Report****

## TEST REPORT ON COARSE AGGREGATES

| | | |
|---|---|---|
| **Lab ID** | : | **CP-2017-06-27-05** **Date: 30-06-17** |
| **Customer** | : | Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore. |
| **Address** | : | Shettyhalli Sub Division, BBMP, Bangalore. |
| **Project Name** | : | Improvements to Roads & Drains chikkasandra 13th, 14th, 15th connected to A & B layout in ward no.12 in Shettyhalli Sub Division. |
| **Agency** | : | Technical Manager (west), KRIDL, Project Implementation Unit, No.280, 59th cross, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560010 |
| **Customer Reference** | : | BBMP/EE/DD/WO/121/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Sample Condition** | : | Satisfactory |
| **Date of Receipt** | : | 27-06-17 |
| **Sample ID No** | : | 2017-06-27-05-02(b) |
| **Sample Type/ Size** | : | 20mm down size coarse aggregate |
| **Reference to BIS codes** | : | IS: 383:2016 (Specification for Coarse and fine Aggregates )<br>IS: 2386 :1963(Part - 1,3,4) RA2011<br>IS 2386 Part 1: Particle Size and Shape<br>IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption<br>IS 2386 Part 4: Mechanical Properties |
| **Date of test** | : | 27-06-17 |

**SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:**

**Total weight taken : 5000 grams**

| Sample No. | Sieve No. | Weight Retained in gms | Cumulative Weight Retained in gms | % Cumulative Weight Retained | % Passing | Required as per IS 383:2016 |
|---|---|---|---|---|---|---|
| 1 | 40 mm | 0 | 0 | 0 | 100 | 100 |
| 2 | 20 mm | 243 | 243 | 4.9 | 95.1 | 90-100 |
| 3 | 10 mm | 2678 | 2921 | 58.4 | 41.6 | 25-55 |
| 4 | 4.75 mm | 1789 | 4710 | 94.2 | 5.8 | 0-10 |
| 5 | Pan | 290 | 5000 | 100 | 0 | – |

AE-12
ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಬಿ. ರಸ್ತೆ, ರಾಜಾಜಿನಗರ, ಬೆಂಗಳೂರು



CIVIL Pro Sig..... Date..... BANGALORE

R. Khan

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com